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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/808,501	03/14/2001	John Anthony Beaven	GB920000055US1	3614

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EXAMINER	
KANG, INSUN	

ART UNIT	PAPER NUMBER
2193	

DATE MAILED: 04/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/808,501	BEAVEN ET AL.	
	Examiner	Art Unit	
	Insun Kang	2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 January 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-49* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-49* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to the Appeal Brief filed 1/17/2006.

2. In view of the appeal brief filed on 1/17/2006, prosecution is hereby reopened. New grounds of rejection are introduced below. To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or, (2) request reinstatement of the appeal. If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted.

The previous office action has been withdrawn. Claims 1-49 are pending in the application.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-14, 17-30, 33-46 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bachmann et al. ("Technical Concepts of Component-Based Software Engineering," 5/2000) hereinafter referred to as "Bachmann" in view of Colby et al. (US patent 6,006,264) hereafter Colby.

Per claim 1:

Bachmann discloses:

-a component specification element (i.e. "These design rules take the form of a component model, or a set of standards and conventions to which components must conform," pg 10 last paragraph; pg 20 last paragraph);

-a control flow specification element (i.e. "interaction contracts," pg 21 paragraphs 2-3; pg 12 5.21. Specifying Behavior)

- a data flow specification element (i.e. see 5.2.3 Specifying Quality of Service in pg 13);

-a resource specification element (i.e. "resource management," pg 24 paragraphs 3-4; pg 29 paragraph 3-4);

-a quality of service specification derivation element (i.e. see 5.2.3 Specifying Quality of Service in pg 13) having for output an application model in combination with a quality of service specification derived from relations between components, control flows, data flows and resources(i.e. "The specification of quality attributes...reusability, maintainability...and usability," pg 13 paragraph 5; "This interface specification describes a number of functional properties of a component that provides a directory service...the names, signatures of two operations of the directory service...a set of rules that map sequences of input events to sequences of output events," pg 18 paragraph 3)

-wherein said quality of service specification is made available to a runtime engine for deployment as a runtime contract in a runtime processing environment (i.e. "These contractual obligations ensure that independently developed components obey certain

rules so that components interact...in predictable ways, and can be deployed into standard build-time and run-time environments," pg 3 last paragraph).

Bachmann does not explicitly teach the Qos specification is derived by implication. However, Colby teaches that such implicit derivation was known in the pertinent art, at the time applicant's invention was made, to derive the Qos requirements implicitly from the relationships of the individual components (i.e. col. 3 lines 45-67) such as those disclosed in Colby. It would have been obvious for one having ordinary skill in the art to modify Bachmann's disclosed system to incorporate the teachings of Colby. The modification would be obvious because one having ordinary skill in the art would be motivated to derive the Qos requirements as necessary by implication based on the contents of individual flows as suggested by Colby.

Per claim 2:

The rejection of claim 1 is incorporated, and further, Bachmann discloses a runtime engine for deploying said runtime contract (i.e. "The deployment contract...describes the interface that components must implement so that the framework can manage their resources," pg 30 Table 1: first and second rows; "The rules ensure ...that components may be easily deployed into ...runtime environments," pg 28 paragraph 2) as claimed.

Per claim 3:

The rejection of claim 1 is incorporated, and further, Bachmann discloses

a messaging requirement contract (i.e. see 5.2.2 Specifying Synchronization," pg 13; "which communication protocol is used," pg 23, Uniform composition) as claimed.

Per claim 4:

The rejection of claim 1 is incorporated, and further, Bachmann discloses a transactionality requirement contract (i.e. "specifying that patterns of interaction are transactional," pg 24 lines 1-2) as claimed.

Per claim 5:

The rejection of claim 1 is incorporated, and further, Bachmann discloses a security requirement contract (i.e. "These properties include ... security," pg 12 first paragraph) as claimed.

Per claim 6:

The rejection of claim 1 is incorporated, and further, Bachmann discloses a recoverability requirement contract (i.e. see Interaction schemes in pg 24; pg 12 first paragraph; 5.2.3 Specifying Quality of Service, pg 13) as claimed.

Per claim 7:

The rejection of claim 1 is incorporated, and further, Bachmann discloses a completion requirement contract (i.e. see Interaction schemes in pg 24; pg 12 first paragraph; 5.2.3 Specifying Quality of Service, pg 13) as claimed.

Per claim 8:

The rejection of claim 7 is incorporated, and further, Bachmann discloses a completion requirement contract specifying transactional behavior (i.e. "how qualities of service such as ...transactions are achieved," pg 24 Interaction schemes; "specifying that patterns of interaction are transactional," pg 24 lines 1-2) as claimed.

Per claim 9:

The rejection of claim 7 is incorporated, and further, Bachmann discloses a completion requirement contract specifying compensation behavior (i.e. 5.2.3. Specifying Quality of Service, pg 14 lines 1-5).

Per claim 10:

The rejection of claim 1 is incorporated, and further, Bachmann discloses at least one of a reliability, availability and serviceability requirement contract (i.e. "reliability," in 5.2.3 Specifying Quality of Service, pg 13).

Per claim 11:

The rejection of claim 1 is incorporated, and further, Bachmann discloses a quality of delivery requirement contract (i.e. "These properties include ... availability," pg 12 first paragraph; "quality of service includes attributes such as maximum response delay, average response, and precision," pg 13 5.2.3 Specifying Quality of Service).

Per claim 12:

The rejection of claim 1 is incorporated, and further, Bachmann discloses at least one of a priority requirement and a response goal requirement contract(i.e. see 5.2.3 Specifying Quality of Service in pg 13).

Per claim 13:

The rejection of claim 1 is incorporated, and further, Bachmann discloses a performance requirement contract (i.e. pg 13 5.2.3 Spefifying Quality of Service; "These properties include ... performance," pg 12 first paragraph).

Per claim 14:

The rejection of claim 1 is incorporated, and further, Bachmann discloses the quality of service specification is stored in a repository (i.e. "Java Modeling Language," pg 12, 5.2.1 Specifying Behavior).

Per claim 17:

The rejection of claim 1 is incorporated, and further, Bachmann discloses a quality of service specification is stored in a modeling language (i.e. "Java Modeling Language," pg 12, 5.2.1 Specifying Behavior).

Per claims 18-30, 33-46 and 49, they are the method versions of claims 1, 2, 4-14 and 17, respectively, and are rejected for the same reasons set forth in connection with the rejection of claims 1, 2, 4-14 and 17 above.

5. Claims 15, 16, 31, 32, 47 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bachmann et al. ("Technical Concepts of Component-Based Software Engineering," 5/2000) hereinafter referred to as "Bachmann," in view of Colby et al. (US patent 6,006,264) hereafter Colby.as applied to claims 1-14, 17-30, 33-46 and 49 above, and further in view of Koistinen et al. ("Quality of Service Aware Distributed Object Systems," 5/1999) hereinafter referred to as "Koistinen."

Per claim 16:

The rejection of claim 1 is incorporated, and further, Bachmann does not explicitly teach that the quality of service specification is stored in XML. However, Koistinen teaches that storing a quality of service specification in a tagged markup language such as XML was known in the art of software component-based development and configuration, at the time applicant's invention was made, "so that it can be understood readily by humans and parsed easily (pg 9, Implementation section)" such as that disclosed in Koistinen. It would have been obvious for one skilled in the art of computer software component-based development and configuration to modify Bachmann's disclosed system to use XML. The modification would be obvious because one skilled in the art would be motivated to provide readability and ease parsing as taught by Koistinen (pg 9, Implementation section).

Per claims 32 and 48, they are the method versions of claim 16, respectively, and are rejected for the same reasons set forth in connection with the rejection of claim 16 above.

Per claim 15, this claim is broader version of the claimed system discussed in claim 16 wherein all claim limitations also have been addressed and/or covered in cited areas as set forth the above. XML in claim 16 is a tagged markup language. Therefore, accordingly, see the rejection of claim 16 above.

Per claims 31 and 47, they are the method versions of claim 15, respectively, and are rejected for the same reasons set forth in connection with the rejection of claim 15 above.

Response to Arguments

6. Applicant's arguments with respect to claims 1- 49 have been considered but are moot in view of the new ground(s) of rejection. Therefore this action is made non-final.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Insun Kang whose telephone number is 571-272-3724. The examiner can normally be reached on M-F 7:30-4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on 571-272-3719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

I. Kang
Examiner (AU 2193)

KAKALI CHAKI
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